

NADP QAAG Minutes- Tuesday October 20, 2020

Minutes by: Chris Worley

Present: Chris Worley, Camille Danielson, Martin Shafer, David Gay, Amy Mager, Mark Olson, Richard Tanabe, Cheryl Sue, Bob Larson, Greg Beachley, Tim Sharac, Marcus Stewart, Winston Luke, Doug Burns, Eric Hebert, Greg Wetherbee, Maria Jones, Zac Najacht, Na Zhang, Dana Grabowski, Melissa Puchalski

1. Gage Calibration Method proposed change

Bob Larson discussed modifying the rain gauge calibration method to the “guided accuracy test”. Current method takes 15 minutes/calibration point, temperature changes during 15-minute wait period could influence the calibration. Provide EEMS the option to use the Pluveo accuracy test. Eric Herbert mentioned the Pluveo firmware should be upgraded and an established calibration SOP should be written for reference. Maria said she would need to modify her database to accommodate this. Camille asked how you determine what calibration weights to use. Bob replied this is flexible. Richard stated he has an SOP for the guided accuracy method and weights used are NIST traceable. Greg Wetherbee asked about calibrating “tipping buckets” more frequently (2/year). Can we trust field operators to do this? Do we need to send USGS personnel? Bob Larson replied that it is very easy to see a calibration issue with these and that once/year should be sufficient.

2. Siting Criteria Team Update

Tim Sharac: Only 24% of sites passed siting criteria in 2019 based on the latest EEMS NADP Audit Report. The most common reason for siting criteria violations was "no object > 1m tall, > 0.6m wide, within 5m" at 45.2%. The second reason is "no vegetation >0.6m tall within 5m" at 23.8%, and lastly due to the dry side bucket not being clean at 22.2%. Tim is working on identifying pairs of closely located sites where one site fails the "no object > 1m tall, > 0.6m wide, within 5m" siting criteria to evaluate whether there are differences between these two sites with respect to:

- a) NTN concentrations
- b) % of A, B, or C coded quality rated data
- c) Debris counts

Initial analysis provided on the MS Teams platform included simplistic NTN debris count analysis and showed some states including NY, PA, CO and others showing increases in the proportion of B coded data while A coded data is falling. Also, this analysis shows an increase in B coded data aligns well with the increase in debris counts over the last 5+ years, which is what we would expect.

3. Site Support: Eric Herbert discussed field operator’s feedback about not receiving information from the PO to the field about their inquiries. Field operators are just looking

for feedback on questions. Richard has discussed steps to improve this with training programs. Winston mentioned at one of his sites the field operator did not receive adequate Wet Dep. Training. Could this be happening at many other sites? Is it worth having all operators review training videos on an annual basis? PO and Site sponsors may not be getting problem information conveyed to them. Winston asked about performing virtual site audits (have operators send site photos). Martin asked if there is a formal onboarding process set up for new operators. Richard said this has been discussed in the PO, but part of the issue is the PO may not be aware that operators have changed, sometimes 2 or 3 times before the PO identifies the change. Richard suggested we begin looking at the initials on the FORFS to help identify operator changes. Create and send out welcome packages w/ links to website info. Perform a follow up with new operators. Zac Najacht briefly discussed that messaging could be included on data pack/reports about changing operators and welcome packets. Richard proposed creating a small workgroup to come up with our plan to address these issues, then implement and present at the Spring Conference. Eric and Winston volunteered to be on the workgroup with Richard. Eric Herbert said they are keeping up with site audits for the most part. Cannot get to a few sites (Canada/Alaska) due to Covid 19.

4. **AMoN:** Chris Worley presented information on reusing AMoN cores to help reduce costs to the network. They have gone through several dip coating iterations but seem to be making progress. Last dip coated set was demonstrating slightly low bias relative to the manufacture's samplers-- close enough to continue pursuing the investigation. Next step will be to utilize the Eagle Heights site and implement 3 or 4 iterations of 2 week deployment comparisons between dip coated and the manufacture's samplers. If this looks good, then discuss any patent infringement issues with WARF. If none, then begin large pilot study with AMoN sites after buying or designing a dip coating apparatus. Martin said it would be worth investigating the differences between white and blue diffusion bodies. He mentioned a paper showed recovery difference between these 2 body types.
5. **USGS PCQA program proposed changes:** Greg Wetherbee presented his proposed changes to the PCQA program due to concerns about continued cost increases and the FY22 USGS budget. Greg proposed integrating the NADP QA into the SRS (standard reference sample) program in federal FY21 to ensure continuity of NADP QA/QC should financial support fall short in FY22. Add all 11 PCQA labs to the SRS round robins. This would include 8 to 10 PCQA labs for total Hg. Labs receive a lot more standard reference material free. Martin and Cheryl voiced concerns about utilizing a surface water matrix rather than precipitation. Mark Olson voiced that what is in place generates important data/feedback. He is not sure why ICAL did not utilize this program fully, but we would like to integrate this more into our lab review/process. It has been difficult these last few years for us to begin to develop a process to incorporate this data due to all the continued changes that have been occurring.

Greg also proposed eliminating the Field audit and System Blank program by USGS and possibly integrating this within the CAL/HAL. Costs would include bottles, solutions, shipping and time/salary. Greg estimated \$600 to \$1000 is spent on shipping/year.

Martin and Camille thought we should tie this (field audit/system blank program) in with the upcoming DQO summit. Gather more information before making a decision.

Greg is hoping to resurrect the co-located sampler program starting in January 2021 with 2 sites. Install an additional two sites in the Fall of 2021. Begin monitoring early 2022. These will be USGS N-CON sites only. This program will help provide overall variability metrics for NADP measurements.

6. **DQO Summit:** Marcus Stewart has volunteered to facilitate the DQO summit (thank Marcus). Marcus has worked on the CASNET DQO and has been involved with multiple DQO NADP conversations over the years. Martin mentioned the DQO summit initiative will be discussed/highlighted at the 2020 Fall Conference.
7. **Virtual Audits of CAL/HAL/PO:** Camille asked if there was any interest in conducting virtual audits of the CAL/HAL and PO due to travel restrictions and continued Covid outbreaks. No firm decision was made. Camille said she would try to gather information from other lab sections that are, or will be involved in a virtual audit to provide a framework for us. Chris said he was in favor of a virtual audit, rather than delaying. Possibly just the HAL could be virtually audited to see how it goes first. Richard said he would contact Greg to come up with a plan.
8. **Addition of “q” notes code to all networks:** Camille discussed that the CAL/HAL record sample and analyte specific analytical issues internally, however these “qualifiers” are not conveyed to the data user through data reports or the website. The CAL/HAL are working on standardized analytical qualifiers that could be conveyed to the data user by way of a “q” notes code, which would be listed on the report data pack.
9. Old Items – there was not time to discuss – carry over to next meeting